



Space Debris Activities in China-2021

Report to IAA Space Debris Committee

March 28, 2022

Zizheng Gong

China Academy of Space Technology (CAST)

gongzz@263.net

CAST



11th China National Space Debris Conference

- Regular Conference held every two years, started in 2001.
- January 9 - 11, 2022, Wenchang, Hainan, China.



Group photo of the conference representatives



11th China National Space Debris Conference

Sessions:

- measurements,
- protection,
- ADR,
- NEOs,
- large satellites constellation on LEO, etc.
- modelling,
- mitigation,
- Space Traffic Management,
- legal business, etc.

152 participants.

76 presentations, **25** posters,

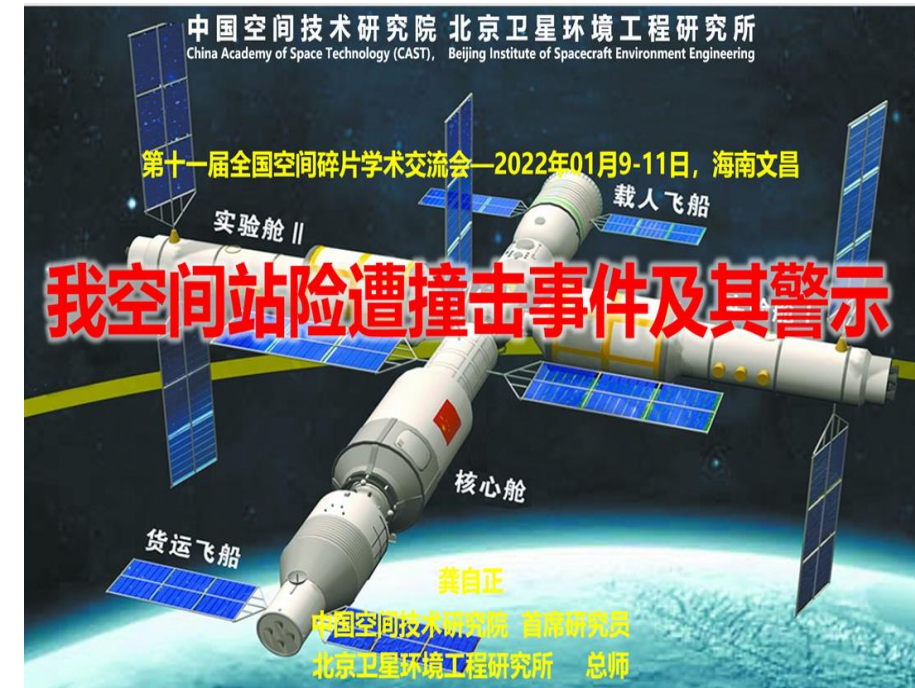




11th China National Space Debris Conference

● Plenary Lecture

1. Development thoughts on space debris environmental management.
2. progress and prospect of Ali 1.2m Wide-field survey telescope.
3. Satellite Internet development and related space debris problems.
4. Motion characteristics of large space debris and flexible drag ADR.
5. Near collision events of China Space and safety precautions.
6. Micro debris environment and advances in spacecraft protection technology.





Space Debris Research 20 years in China

----Retrospect and Prospect

- 1999: The Chinese Special financial plan for Space Debris Research, which is part of “Five-year plan for the national economy”.
- 500 million RMB per five year.
- released the 20 year achievement exhibition album.



1. Development History
2. Innovation & Application
3. Communication & Cooperation
4. Future Prospects



The 1st China Planetary Defense Conference

- January 23 - 27, 2021, Guilin, Guangxi, China.
- Regular Conference will be held every two years.



Group photo of the conference representatives

CAST



The 1st China Planetary Defense Conference

- 315 participants.
- 129 presentations.

第一届全国行星防御大会 *The 1st China Planetary Defense Conference*

广西·桂林
2021年10月23日--27日



Group photo of the conference representatives

CAST



The 1st China Planetary Defense Conference

Sessions:

- Discovery, observation, characteristic of NEA.
- Monitoring and early warning of NEA.
- Hazard assessment of NEA impact.
- NEA Deflection and destruction modeling and testing.
- Impact risk response system and capacity development.
- Relevant mechanisms, policies and regulations.
- International cooperation on impact risk Response



Debris related Xiangshan Science Conference

The 683th Xiangshan Science Conference (Oct. 29-30, 2020)

**Frontier sciences and key technologies
for Space Traffic Management**





National Symposium on Hypervelocity Impact

第二届全国超高速碰撞会议代表合影

2016年12月 北京会议中心



第三届全国超高速碰撞学术会议

2019.06 中国 哈尔滨 科学会堂



- ~60 presentations, ~200 participants.
- Sessions:
 1. HVI phenomenon and mechanism.
 2. HVI launch, diagnosis and testing techniques.
 3. HVI Numerical simulation and analysis.
 4. Space debris protection of spacecraft.
 5. NEOs impact effects and defense.
 6. Others.
- The 1th : 2013.07, Mianyang.
- The 2th : 2016.12, Beijing.
- The 3th : 2019.06, Haerbin.
- The 4th : 2022.05, Shanghai